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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,300	01/14/2004	Christopher J. Lord	42P5679C	4460

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EXAMINER

JONES, HEATHER RAE

ART UNIT	PAPER NUMBER
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2621

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/757,300

Applicant(s)

LORD ET AL.

Examiner

Heather R. Jones

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/14/2004, 11/9/2006.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 11-15 defines a machine-readable medium embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed machine-readable medium can include a piece of paper on which the program is written.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswami et al (U.S. Patent Application Publication 2003/0011684).

Regarding claim 1, Narayanaswami et al. disclose a method comprising: maintaining a current state of auxiliary information regarding a sequence of video frames, the sequence of video frames being encoded as a video bit stream having video frame data for each respective video frame of the sequence of video frames (paragraph [0018], [0049]); comparing the current state of auxiliary information with auxiliary information regarding a current video frame of the sequence of video frames to determine differential information (paragraph [0051]). However, Narayanaswami et al. fails to explicitly disclose annotating the differential information to the video bit stream as an annotation to the video frame data for the current frame. Furthermore, Narayanaswami et al. discloses that a parameter, such as location of the camera, is computed to determine its displacement, if any, from a previous position, so that the position of the camera may be accurately recorded (paragraph [0035]). Official Notice is taken that the differential information (displacement of the camera) can be annotated to the video frame data along with storing it as the camera's location parameters to ensure calculating the accuracy of the camera location. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made that after comparing a current state of the video information (recorded parameters) with gathered video information, if differential information was determined to exist, such as if the location of the camera changed, then the

differential information (e.g. new location of the camera) would be stored as annotations to the video frame data to ensure the correct parameter information (video information) would be accurately recorded.

Regarding claim 2, Narayanaswami et al. discloses all the limitations as previously discussed with respect to claim 1 including that the current state of auxiliary information indicates the latest encoded information (e.g. new location of the camera) in the bit stream and is maintained in a state storage memory (in the watermark processor).

Regarding claim 3, Narayanaswami et al. discloses all the limitations as previously discussed with respect to claim 1 including that the auxiliary information comprises additional non-visual information regarding video frames (see the table on page 4 after paragraph [0043]).

Regarding claim 4, Narayanaswami et al. discloses all the limitations as previously discussed with respect to claim 1 including that the auxiliary information comprises video processing information regarding video frames (paragraph [0051]).

Regarding claim 5, Narayanaswami et al. discloses all the limitations as previously discussed with respect to claim 1 as well as further comprising encoding the differential information before annotating the differential information (Narayanaswami et al. further inherently discloses an encoder coupled to the differential generator configured to encode the differential information as an input

to the annotator, the encoder being inherent in the translation of the differential information into the watermark signal).

Regarding claim 6, Narayanaswami et al. discloses all the limitations as previously discussed with respect to claims 1 and 5 including that the encoded differential information comprises a list of parameters, the parameters being described in a tag lookup table (see the table on page 4 after paragraph [0043] – a list of parameters that can be watermarked on the image).

Regarding claim 7, Narayanaswami et al. discloses all the limitations as previously discussed with respect to claim 1 including that annotating the differential information comprises extending the video bit stream format to include the differential information (see the rejection of claim 1 above). Furthermore, it would have been obvious that after the differential information has been stored as annotations to the video frame data the information would actually be appended to the video frame data so that the correct parameter information that was used when capturing the images would be accurately recorded on the frame data.

Regarding claim 8, Narayanaswami et al. discloses all the limitations as previously discussed with respect to claim 1 including that the annotating comprises annotating only if the differential information indicates a change from the current state of the auxiliary information (paragraph [0039]; see the rejection of claim 1 above – furthermore, if there were no differential information then there would be nothing to annotate).

Regarding claim **9**, Narayanaswami et al. discloses all the limitations as previously discussed with respect to claim 1 as well as the method further comprising gathering the video information regarding the current video frame (paragraph [0051]).

Regarding claim **10**, Narayanaswami et al. discloses all the limitations as previously discussed with respect to claims 1 and 9 including that the differential information comprises the difference between the current state of the auxiliary information and the gathered information (paragraph [0051]).

Regarding claims **11-15**, these are machine-readable medium claims corresponding to the method claims 1-3, 6, and 7. Therefore, claims 11-15 are analyzed and rejected as previously discussed with respect to claims 1-3, 6, and 7.

Regarding claims **16-22**, these are apparatus claims corresponding to the method claims 1-6. Therefore, claims 16-22 are analyzed and rejected as previously discussed with respect to claims 1-6.

Regarding claim **23**, this is an apparatus claim corresponding to the method claims 1, 2, 6, and 7 combined. Therefore, claim 23 is analyzed and rejected as previously discussed with respect to the combination of claims 1, 2, 6, and 7.

Regarding claim **24**, Narayanaswami et al. discloses all the limitations as previously discussed with respect to claim 16 including that the auxiliary information comprises additional non-visual information regarding camera

geometry and identification for the video frames (see the table on page 4 after paragraph [0043]; paragraphs [0034] and [0035]).

Regarding claim **25**, Narayanaswami et al. discloses all the limitations as previously discussed with respect to claim 16 including that the auxiliary information comprises video processing information regarding descriptions and camera positions for the video frames (paragraphs [0034] and [0035]).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather R. Jones whose telephone number is 571-272-7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.




Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Heather R Jones  
Examiner  
Art Unit 2621

HRJ  
June 25, 2007



JOHN MILLER  
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